

RQC/RTP SERIES

Automatic Tool Changers | Features and Benefits

Additional Optional Air, Fluid, Electrical Modules are Available.

Air and fluid ports
modules are available
in NPT, BSPP, and
BSPT (See Page 17)

Optional 19 Pin I/O Module

Spring loaded contacts are
recessed for a better protection

V-Seal provides moisture resistance

Robot Side

Tool Side

Locking Mechanisms

Made from
hardened
stainless steel,
they provide
a low stress,
highly rigid
locking
capability

Latch/Unlatch Switch

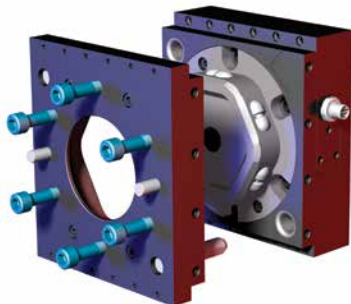
RQC's are pre-equipped for latch,
unlatch (all sizes) and part presence
sensing (sizes 800 & 1200 only)

Dry contact or inductive sensors with
or w/o connectors are available

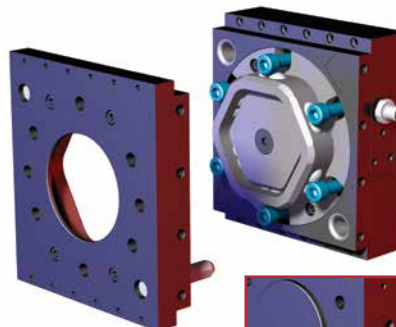
Optional 6 Port
Pneumatic Module

Locating Pins

Optional (4) Self-Sealing
Air Ports Module
(sizes 800 & 1200 only)



Tool Half Adaptor
has tapped holes,
two dowel pin holes
for accurate location
of payload, and
features a ISO9409-1
mounting pattern



Robot Half Adaptor
has counterbored
holes for mounting
with a dowel pin
hole, a raised boss
for location, and
features a ISO9409-1
mounting pattern



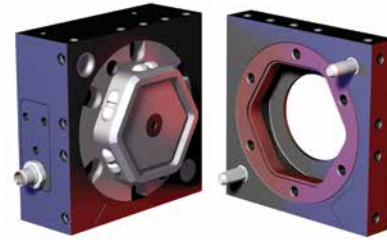
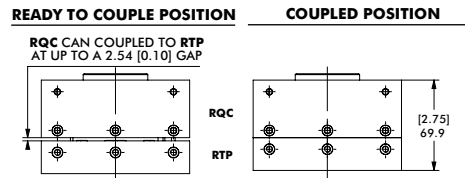
Back Side of Robot
Half Adaptor

RQC/RTP SERIES

Automatic Tool Changers | Technical Information

RQC-200/RTP-200

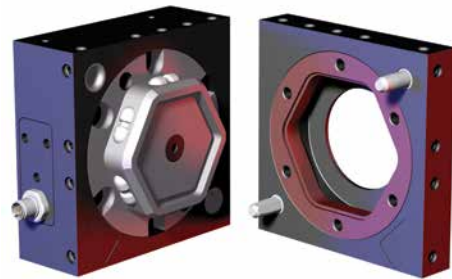
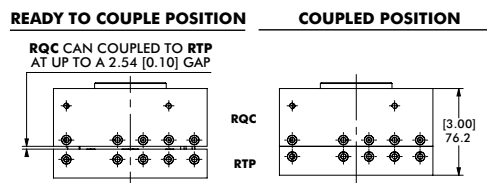
Combined Weight: 3 Kg [6.7 lb]
Max. Payload: 90 Kg [200 lb]
Max. Moment: 810 Nm [7200 in.-lb.]



RQC-200 **RTP-200**
Robot Adaptor Module **Tool Adaptor Module**

RQC-400/RTP-400

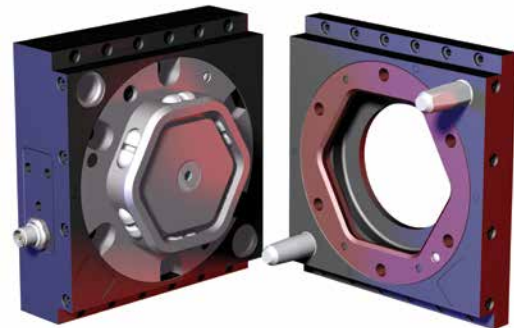
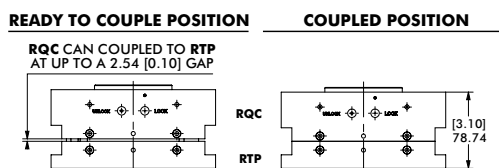
Combined Weight: 4.7 Kg [10.4 lb]
Max. Payload: 180 Kg [400 lb]
Max. Moment: 1580 Nm [14000 in.-lb.]



RQC-400 **RTP-400**
Robot Adaptor Module **Tool Adaptor Module**

RQC-800/RTP-800

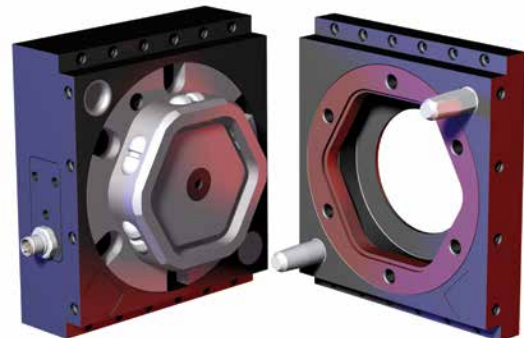
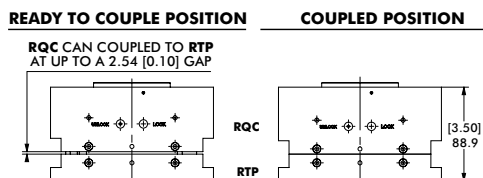
Combined Weight: 7.1 Kg [15.8 lb]
Max. Payload: 360 Kg [800 lb]
Max. Moment: 2490 Nm [22000 in.-lb.]



RQC-800 **RTP-800**
Robot Adaptor Module **Tool Adaptor Module**

RQC-1200/RTP-1200

Combined Weight: 8.3 Kg [18.4 lb]
Max. Payload: 550 Kg [1200 lb]
Max. Moment: 3390 Nm [30000 in.-lb.]



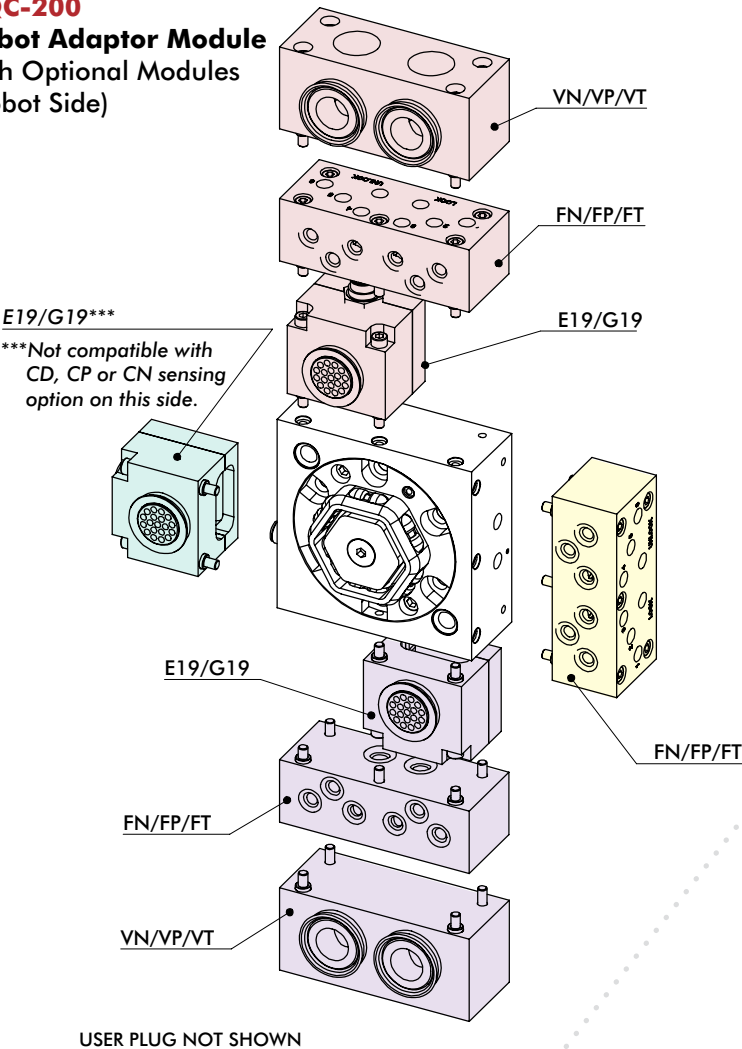
RQC-1200 **RTP-1200**
Robot Adaptor Module **Tool Adaptor Module**

RQC-200/RTP-200

Automatic Tool Changers | Module Usage Illustrations

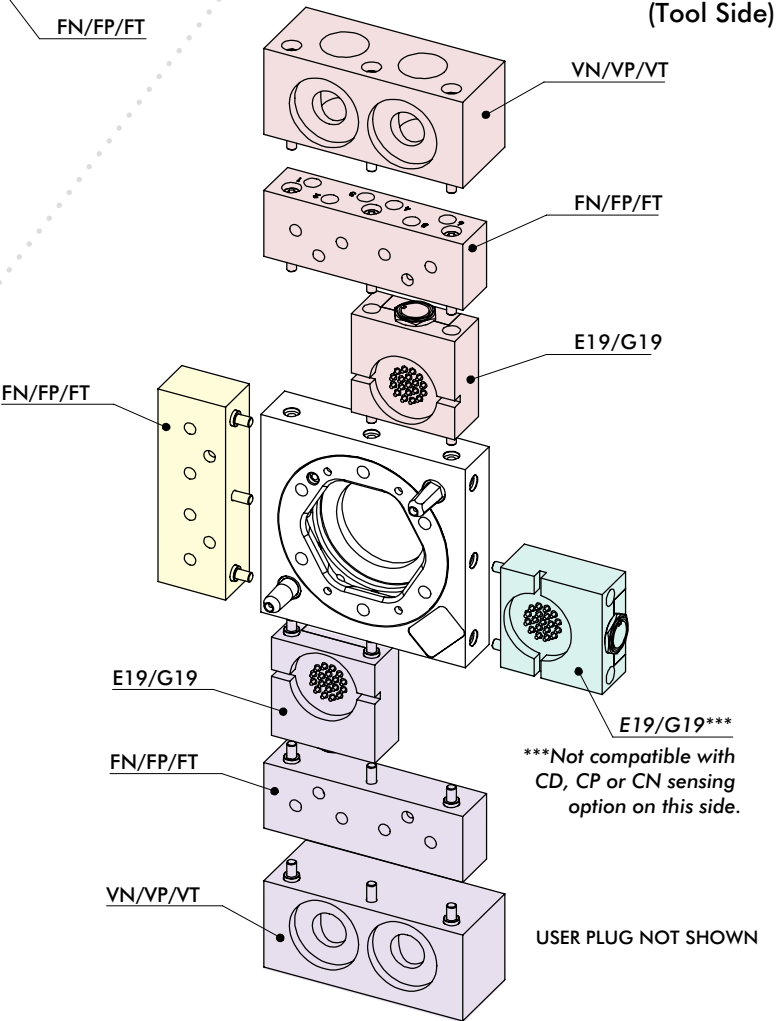
RQC-200

Robot Adaptor Module
with Optional Modules
(Robot Side)



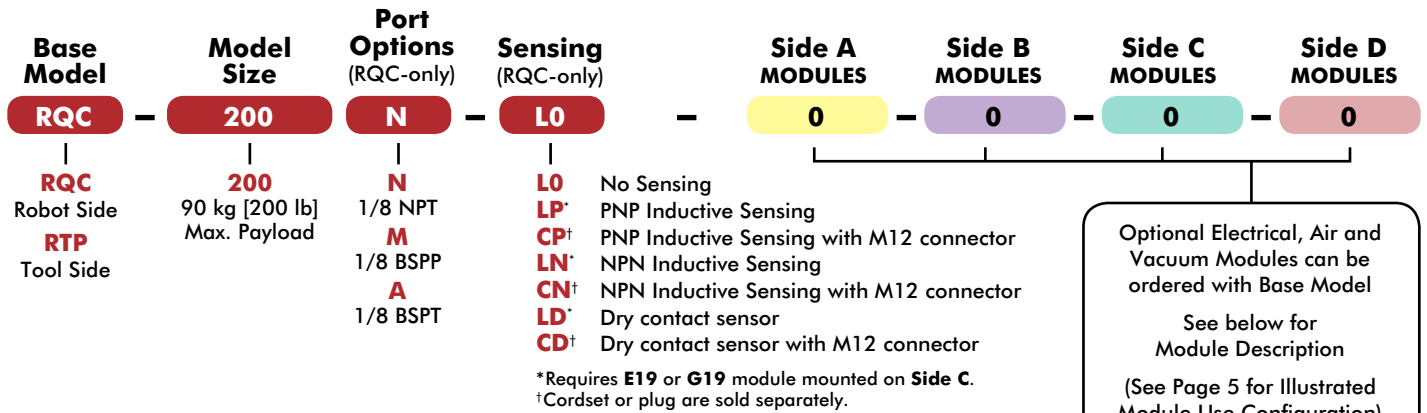
RTP-200

Tool Adaptor Module
with Optional Modules
(Tool Side)



RQC-200/RTP-200

Automatic Tool Changers | Ordering Information



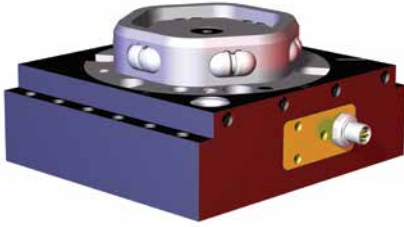
Side A	Side B	Side C	Side D	Order Code	Optional Modules
●	●	●	●	0	No Module
	●	●***	●	E19†***	19 pin, 3 Amp, 48 VDC Module w/Turck M12 Conn, w/o Cordset
	●	●***	●	G19†***	19 pin, 5 Amp, 120 VDC Module w/Industrial User Conn., w/o Cable
●	●		●	FN	6 X 1/8" NPT Air Ports Module, Face Seal, 10 Bar
●	●		●	FP	6 X 1/8" BSPP Air Ports Module, Face Seal, 10 Bar
●	●		●	FT	6 X 1/8" BSPT Air Ports Module, Face Seal, 10 Bar
	●		●	VN	2 X 3/4" Vacuum + 4 X 1/4" Air NPT Ports Module, Face Sealing
	●		●	VP	2 X 3/4" Vacuum + 4 X 1/4" Air BSPP Ports Module, Face Sealing
	●		●	VT	2 X 3/4" Vacuum + 4 X 1/4" Air BSPT Ports Module, Face Sealing

†Cordset or plug are sold separately. ***Not compatible with CD, CP or CN sensing option on Side C.

NOTE: Only (1) module can be mounted per side. Modules usage is based on the size of the Base Model and which side the module can be mounted.

RQC-200 (ROBOT SIDE)

Automatic Tool Changers | Technical Specifications | Dimensions



Specification:

Max. Payload **W**: 90 Kg [200 lb]

Cylinder Bore: Ø53mm [2.09in]

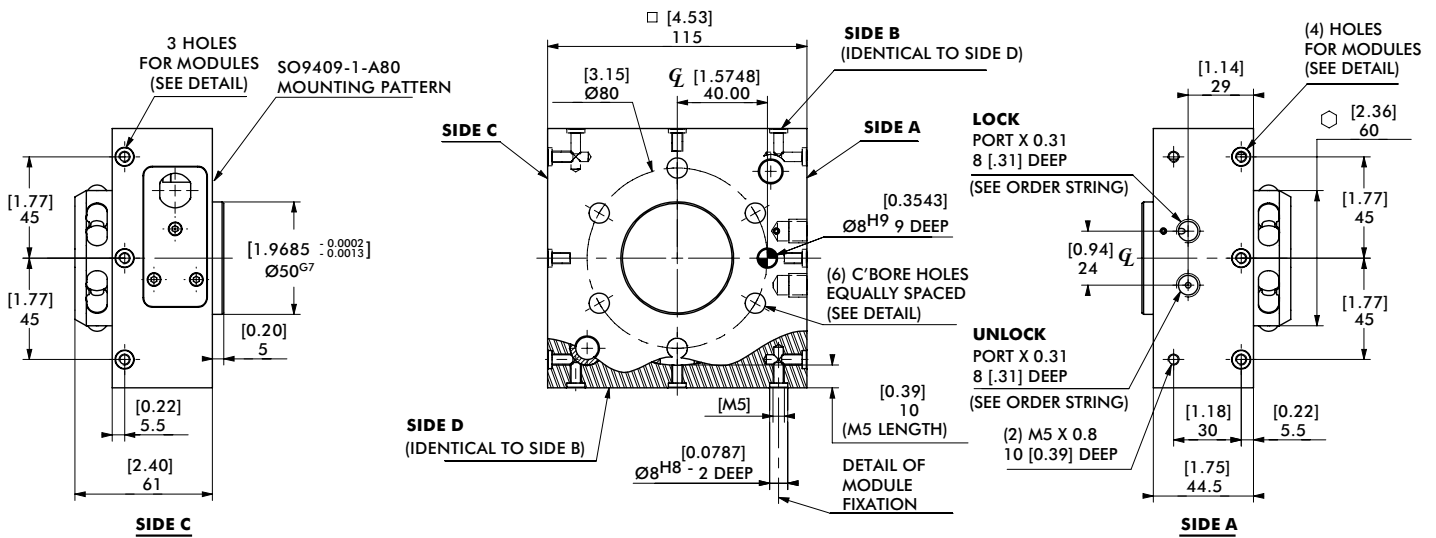
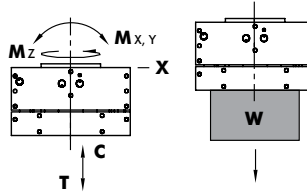
Displacement: 41.3 cm³ [2.52in³]

Loading Capacity:

Max. Tensile **T**: 1330 N [300 lb]

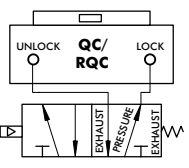
Max. Compressive **C**: 1780 N [400 lb]

Max. Moment (**M_x/M_y/M_z**): 1580 Nm [810 in.-lb.]



FAILSAFE OPERATION:

4-WAY VALVES WITH A SPRING RETURN ARE RECOMMENDED TO MAINTAIN AIR PRESSURE TO THE LOCK PORT DURING EMERGENCY STOP CONDITIONS.



UNLESS OTHERWISE NOTED ALL TOLERANCES ARE AS SHOWN BELOW

⌀
DIMENSIONS ARE
SYMMETRICAL ABOUT
CENTERLINE

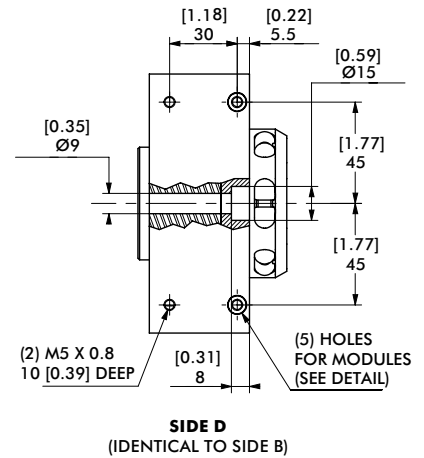
THIRD ANGLE
PROJECTION

ALL DOWEL HOLES ARE SF (SLIP FIT).
LOCATIONAL TOLERANCE
±.0005" OR [±.013MM]

METRIC THREADS
COURSE PITCH

IMPERIAL ([IN.])
0.00 = ±.01
0.000 = ±.005
0.0000 = ±.0005

METRIC (MM)
[0] = [±.25]
[0.0] = [±.13]
[0.00] = [±.013]



RTP-200 (TOOLING SIDE)

Automatic Tool Changers | Technical Specifications | Dimensions

Specification:

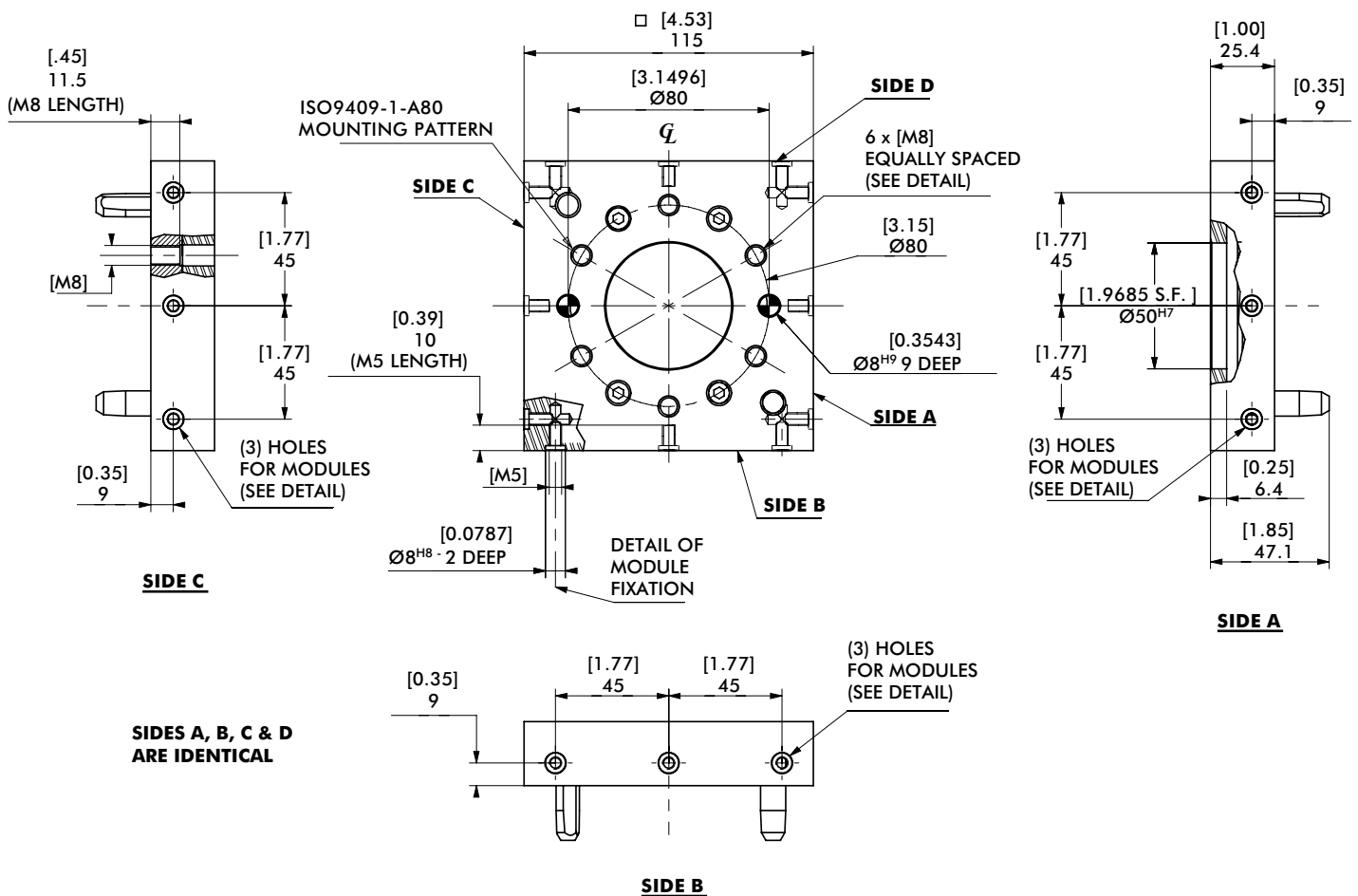
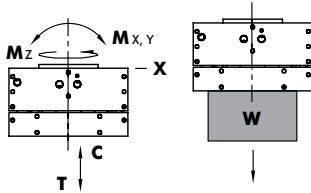
Max. Payload **W**: 180 Kg [400 lb]

Loading Capacity:

Max. Tensile **T**: 2670 N [600 lb]

Max. Compressive **C**: 3560 N [800 lb]

Max. Moment (**M_x/M_y/M_z**): 1580 Nm [14000 in.-lb.]



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⌂
THIRD ANGLE
PROJECTION

⊙
ALL DOWEL HOLES ARE SF (SLIP FIT).
LOCATIONAL TOLERANCE
± .0003" OR [± .013MM]

⌀
METRIC THREADS
COURSE PITCH

IMPERIAL ([IN.])
0.00 = ± .01
0.000 = ± .005
0.0000 = ± .0005

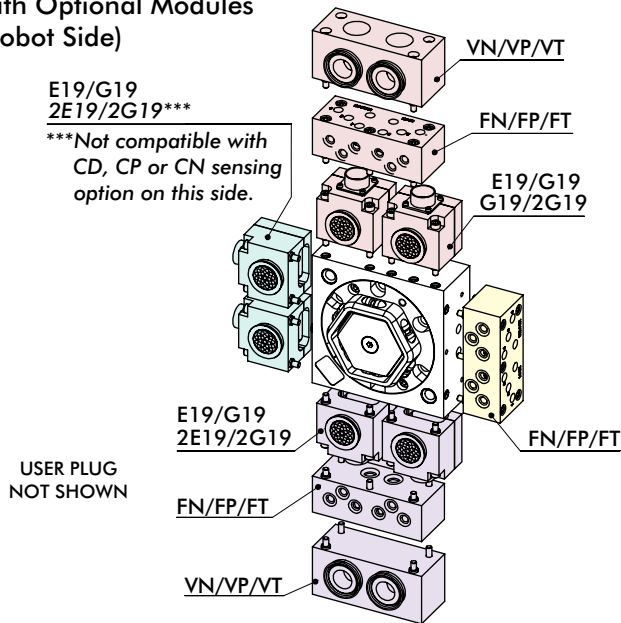
METRIC (MM)
[0] = [± .25]
[0.0] = [± .13]
[0.00] = [± .013]

RQC-400, 800, 1200/RTP-400, 800, 1200

Automatic Tool Changers | Module Usage Illustrations

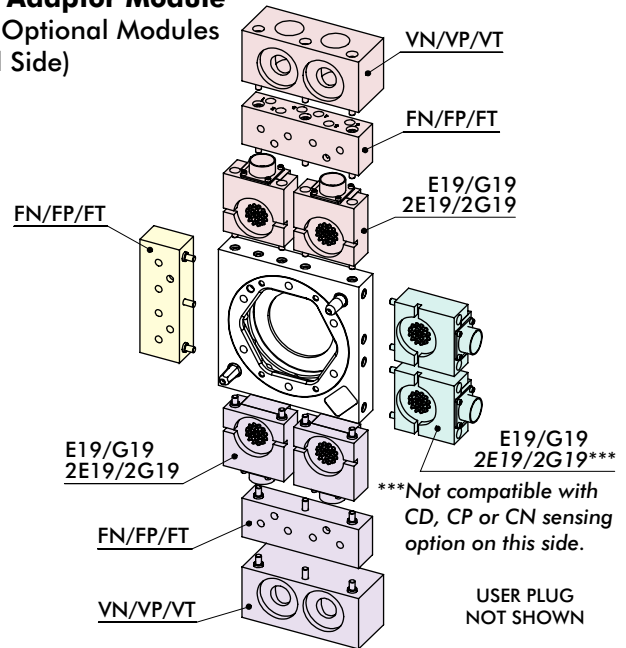
RQC-400

Robot Adaptor Module with Optional Modules (Robot Side)



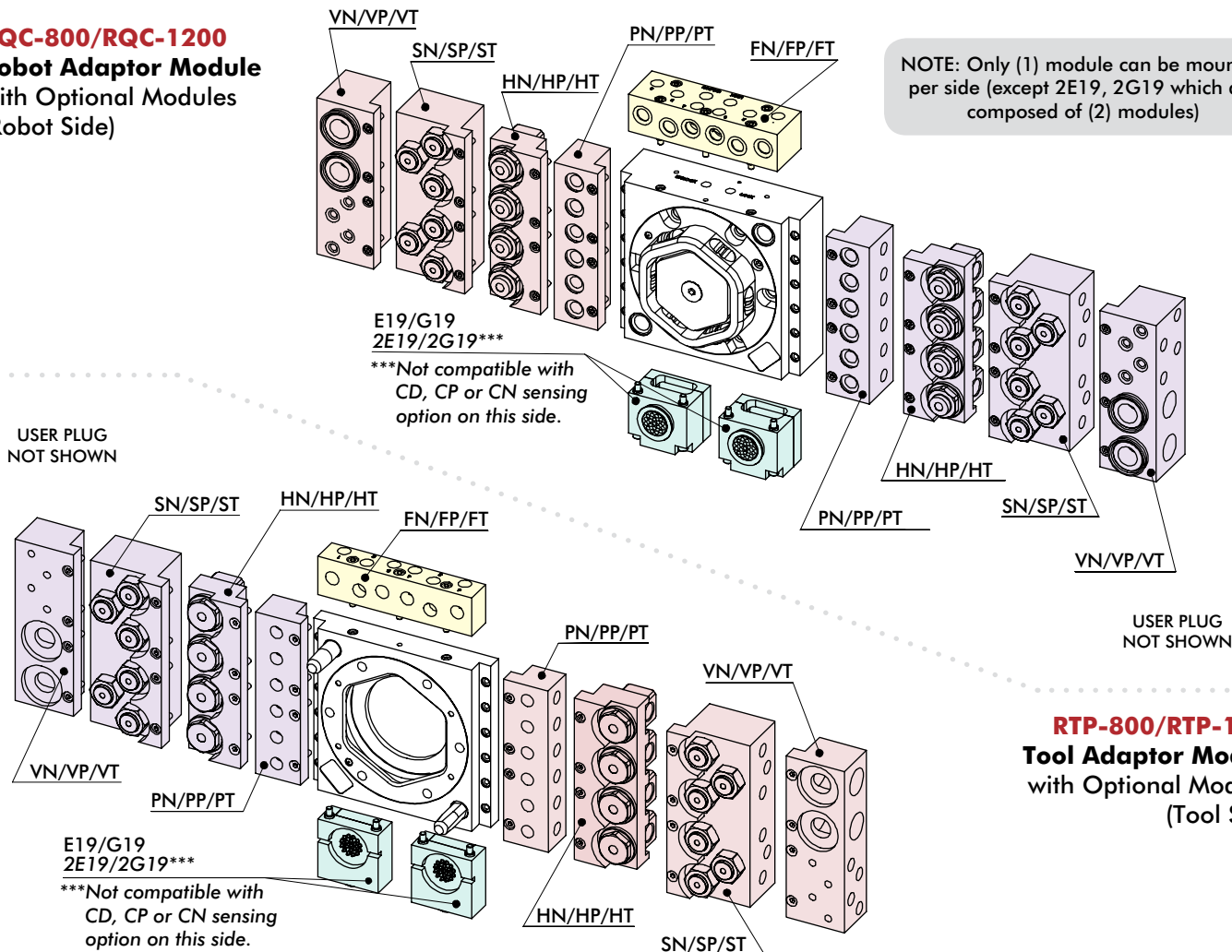
RTP-400

Tool Adaptor Module with Optional Modules (Tool Side)



RQC-800/RQC-1200

Robot Adaptor Module with Optional Modules (Robot Side)



NOTE: Only (1) module can be mounted per side (except 2E19, 2G19 which are composed of (2) modules)

RTP-800/RTP-1200

Tool Adaptor Module with Optional Modules (Tool Side)

RQC-400, 800, 1200/RTP-400, 800, 1200

Automatic Tool Changers | Ordering Information

Base Model	Model Size	Port Options (RQC-only)	Sensing (RQC-only)	Side A MODULES	Side B MODULES	Side C MODULES	Side D MODULES
RQC	400	N	LO	0	0	0	0
RQC Robot Side	400 180 kg [400 lb] Max. Payload	N 1/8 NPT	LO No Sensing	Optional Electrical, Air, Vacuum and Fluid Modules can be ordered with Base Model See below for Module Description (See Page 9 for Illustrated Module Use Configuration)			
RTP Tool Side	800 360 kg [800 lb] Max. Payload	M 1/8 BSPP	LP* PNP Inductive Sensing				
	1200 550 kg [1200 lb] Max. Payload	A 1/8 BSPT	CP† PNP Inductive Sensing with M12 connector				
			LN* NPN Inductive Sensing				
			CN† NPN Inductive Sensing with M12 connector				
			LD* Dry contact sensor				
			CD† Dry contact sensor with M12 connector				

*Requires E19 or G19 module mounted on Side C.

†Cordset or plug are sold separately.

400	800/1200	Side A	Side B	Side C	Side D	Order Code	Optional Modules
•	•	•	•	•	•	0	No Module
	•			•		E19†	19 pin, 3 Amp, 48 VDC Module w/Turck M12 Conn, w/o Cordset
	•			•***		2E19†***	2x 19 pin, 3 Amp, 48 VDC Module w/Turck M12 Conn, w/o Cordset
	•			•		G19	19 pin, 5 Amp, 120 VDC Module w/Industrial User Conn., w/o Cable
	•			•***		2G19***	2x 19 pin, 5 Amp, 120 VDC Module w/Industrial User Conn., w/o Cable
•			•	•	•	E19†	19 pin, 3 Amp, 48 VDC Module w/Turck M12 Conn, w/o Cordset
•			•	•***	•	2E19†***	2x 19 pin, 3 Amp, 48 VDC Module w/Turck M12 Conn, w/o Cordset
•			•	•	•	G19	19 pin, 5 Amp, 120 VDC Module w/Industrial User Conn., w/o Cable
•			•	•***	•	2G19***	2x 19 pin, 5 Amp, 120 VDC Module w/Industrial User Conn., w/o Cable
•		•	•		•	FN	6 X 1/8" NPT Air Ports Module, Face Seal, 10 Bar
•		•	•		•	FP	6 X 1/8" BSPP Air Ports Module, Face Seal, 10 Bar
•		•	•		•	FT	6 X 1/8" BSPT Air Ports Module, Face Seal, 10 Bar
	•	•				FN	6 X 1/4" NPT Air Ports Module, Face Seal, 10 Bar
	•	•				FP	6 X 1/4" BSPP Air Ports Module, Face Seal, 10 Bar
	•	•				FT	6 X 1/4" BSPT Air Ports Module, Face Seal, 10 Bar
	•		•		•	PN	6 X 1/4" NPT Air Ports Module, Face Seal, 10 Bar
	•		•		•	PP	6 X 1/4" BSPP Air Ports Module, Face Seal, 10 Bar
	•		•		•	PT	6 X 1/4" BSPT Air Ports Module, Face Seal, 10 Bar
	•		•		•	SN	6 X 1/4" NPT Air Ports Module, Self Sealing, 10 Bar
	•		•		•	SP	6 X 1/4" BSPP Air Ports Module, Self Sealing, 10 Bar
	•		•		•	ST	6 X 1/4" BSPT Air Ports Module, Self Sealing, 10 Bar
•			•		•	VN	2 X 3/4" Vacuum + 4 X 1/4" Air NPT Ports Module, Face Sealing
•			•		•	VP	2 X 3/4" Vacuum + 4 X 1/4" Air BSPP Ports Module, Face Sealing
•			•		•	VT	2 X 3/4" Vacuum + 4 X 1/4" Air BSPT Ports Module, Face Sealing
	•		•		•	HN	4 X 3/8" NPT Fluid Ports Module, 100 Bar
	•		•		•	HP	4 X 3/8" BSPP Fluid Ports Module, 100 Bar
	•		•		•	HT	4 X 3/8" BSPT Fluid Ports Module, 100 Bar

†Cordset or plug are sold separately. ***Not compatible with CD, CP or CN sensing option on Side C.

NOTE: Only (1) module can be mounted per side. (Except 2E19 and 2G19, which are composed of (2) modules).
Modules usage is based on the size of the Base Model and which side the module can be mounted.

Electrical and pneumatic accessories are ordered separately.

Please note some electrical accessories can only be used with certain modules for either RQC or RTP "Base Models".

For pneumatic accessories, size of "Base Model" is considered.

ELECTRICAL ACCESSORIES

ELCT-048	90° Female Plug, w/o Cable, Solder Type, Cable Clamp for G19 (RQC Only)
ELCT-049	90° male Plug, w/o Cable, Solder Type, Cable Clamp for G19 (RTP Only)
CABL-028	90° Female M12 Cordset with 2M Cable for CP, CN, and CD (RQC Only)
CABL-029	90° Female Cordset with 4M Cable for E19 (RQC Only)
CABL-031	90° male Cordset with 2M Cable for E19 (RTP Only)
OSRK-004	PNP Inductive Sensor Repair Kit (RQC Only)
OSRK-005	NPN Inductive Sensor Repair Kit (RQC Only)
OSRK-006	Dry Contact Sensor Repair Kit (RQC Only)

PNEUMATIC ACCESSORIES

SLKT-402	RQC-400 Standard Seal Repair Kit
SLKT-403	RQC-800 Standard Seal Repair Kit
SLKT-404	RQC-1200 Standard Seal Repair Kit

Automatic Tool Changers | Technical Specifications | Dimensions



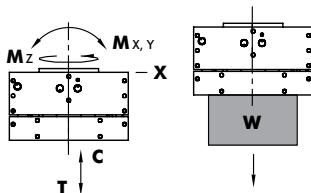
Cylinder Bore: Ø73mm [2.87in]

Loading Capacity:

Max. Tensile **T**: 2670 N [600 lb]

Max. Compressive **C**: 3560 N [800 lb]

Max. Moment ($M_x/M_y/M_z$): 1580 Nm [14000 in.-lb.]

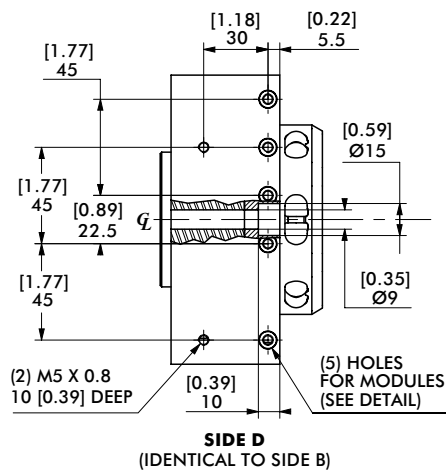


CL

THIRD ANGLE

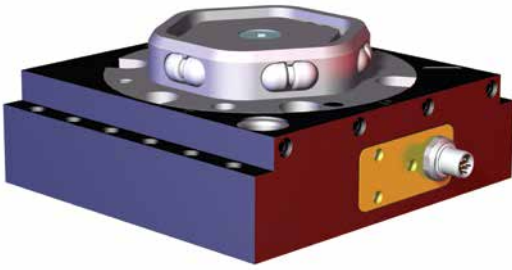
METRIC THREADS

METRIC (MM)

$$\begin{aligned} [0] &= [\pm .25] \\ [0.0] &= [\pm .13] \\ [0.00] &= [\pm .013] \end{aligned}$$


RQC-800, RQC-1200 (ROBOT SIDE)

Automatic Tool Changers | Technical Specifications | Dimensions



RQC-800 Specification:

Max. Payload **W**: 360 Kg [800 lb]

RQC-800 Cyl. Bore:

Ø80mm [3.15in]

RQC-800 Displacement:

95.6 cm³ [5.83in³]

Loading Capacity:

Max. Tensile **T**:

5340 N [1200 lb]

Max. Compressive **C**:

7120 N [1600 lb]

Max. Moment (**M_x/M_y/M_z**):

2490 Nm [22000 in.-lb.]

RQC-1200 Specification:

Max. Payload **W**: 550 Kg [1200 lb]

RQC-1200 Cyl. Bore:

Ø95mm [3.74in]

RQC-1200 Displacement:

153.7 cm³ [9.38in³]

Loading Capacity:

Max. Tensile **T**:

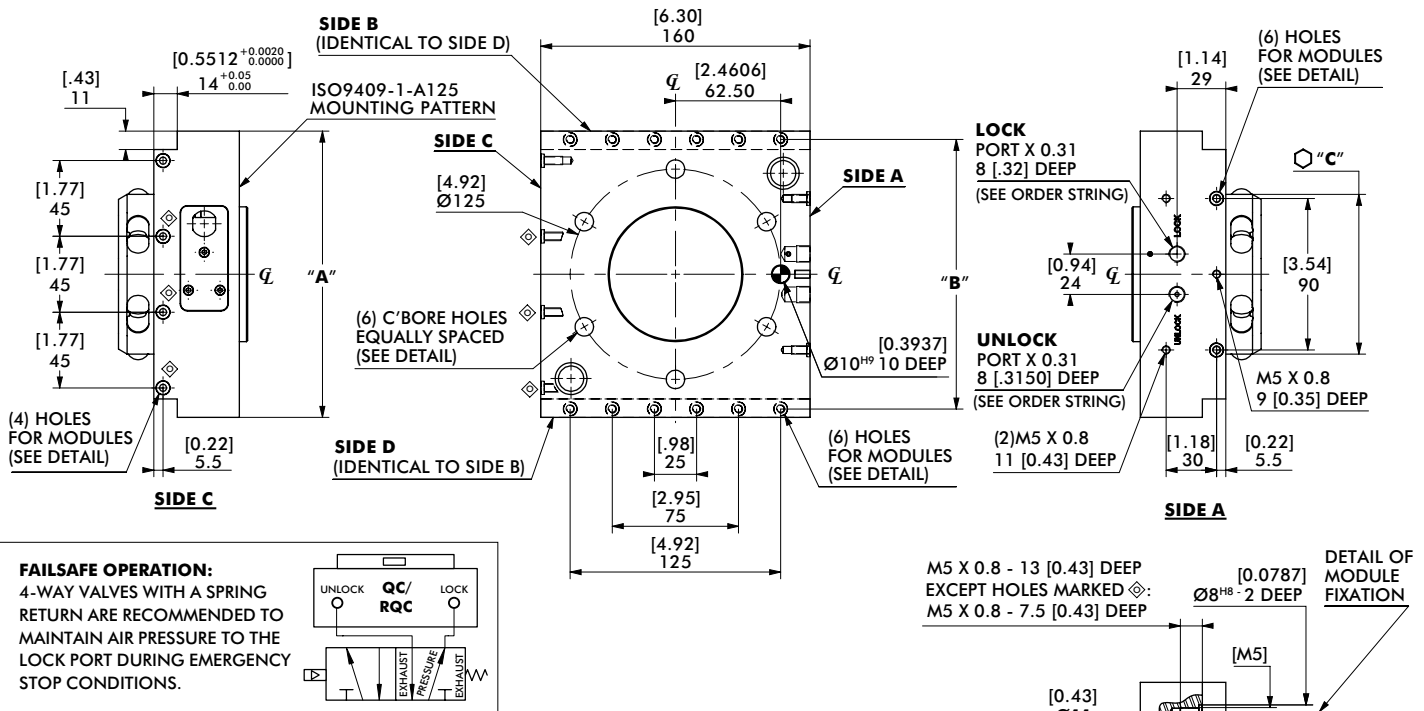
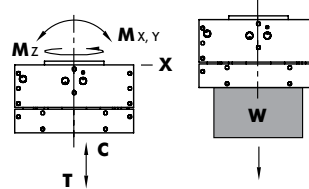
8000 N [1800 lb]

Max. Compressive **C**:

10700 N [2400 lb]

Max. Moment (**M_x/M_y/M_z**):

3390 Nm [30000 in.-lb.]



MODEL NUMBER	"A"	"B"	"C"	"D"	"E"	WEIGHT
RQC-800	[6.69] 170.0	[6.2992] 160.0	[3.73] 94.75	[2.00] 50.8	[2.82] 71.75	[11.8 lb] 6.3 kg
RQC-1200	[7.01] 178.0	[6.6142] 168.0	[4.08] 103.6	[2.25] 57.15	[3.31] 84.15	[14.1 lb] 6.4 kg

RTP-800, RTP-1200 (TOOLING SIDE)

Automatic Tool Changers | Technical Specifications | Dimensions

RTP-800 Specification:

Max. Payload **W**: 360 Kg [800 lb]

Loading Capacity:

Max. Tensile **T**:

5340 N [1200 lb]

Max. Compressive **C**:

7120 N [1600 lb]

Max. Moment (**M_x/M_y/M_z**):

2490 Nm [22000 in.-lb.]

RTP-1200 Specification:

Max. Payload **W**: 550 Kg [1200 lb]

Loading Capacity:

Max. Tensile **T**:

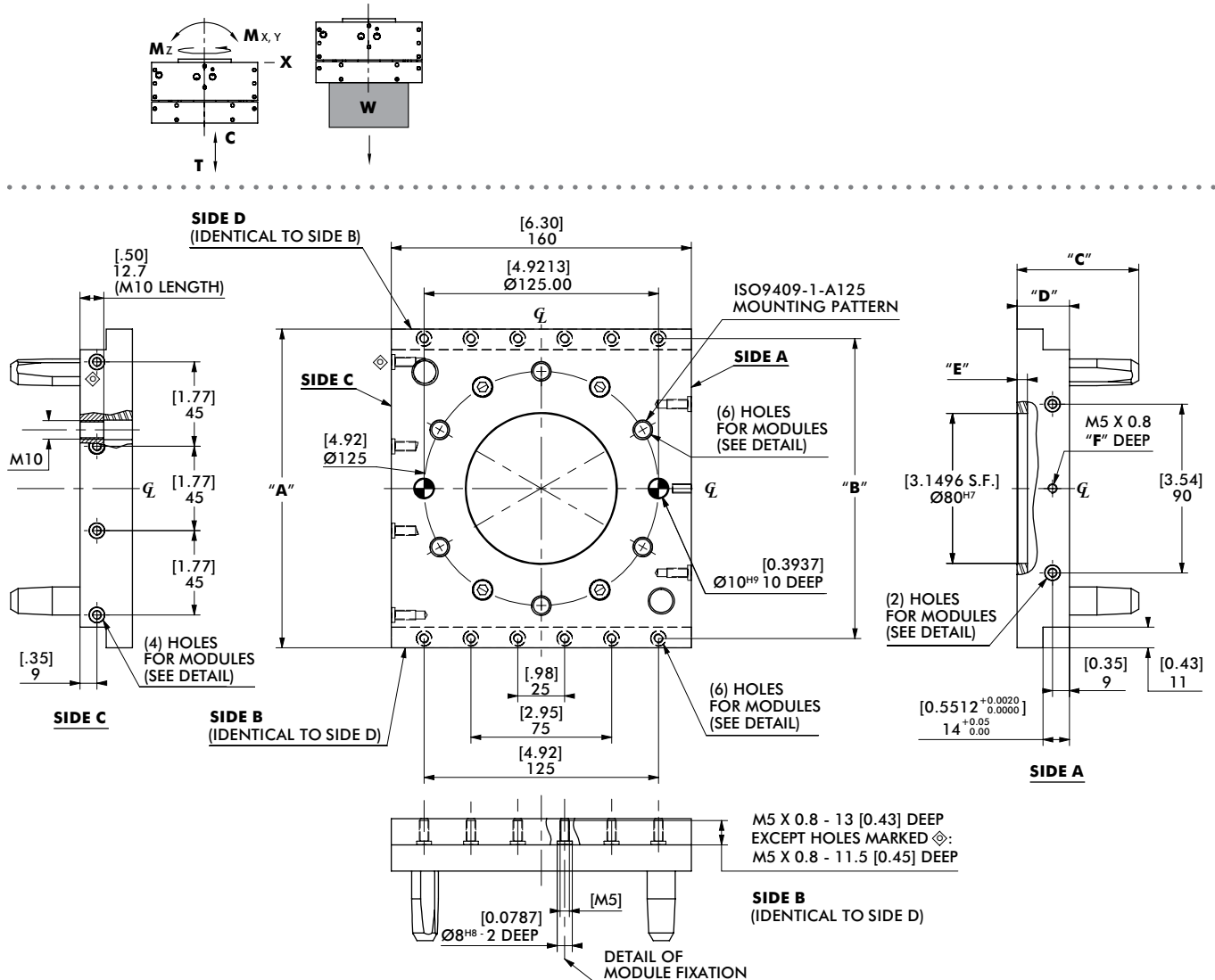
8000 N [1800 lb]

Max. Compressive **C**:

10700 N [2400 lb]

Max. Moment (**M_x/M_y/M_z**):

3390 Nm [30000 in.-lb.]



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SYMMETRICAL ABOUT
CENTERLINE

THIRD ANGLE
PROJECTION

ALL DOWEL HOLES ARE SF (SLIP FIT).
LOCATIONAL TOLERANCE
±.0005" OR (±.013MM)

METRIC THREADS
COURSE PITCH

IMPERIAL ([IN.])
0.00 = ±.01
0.000 = ±.005
0.0000 = ±.0005

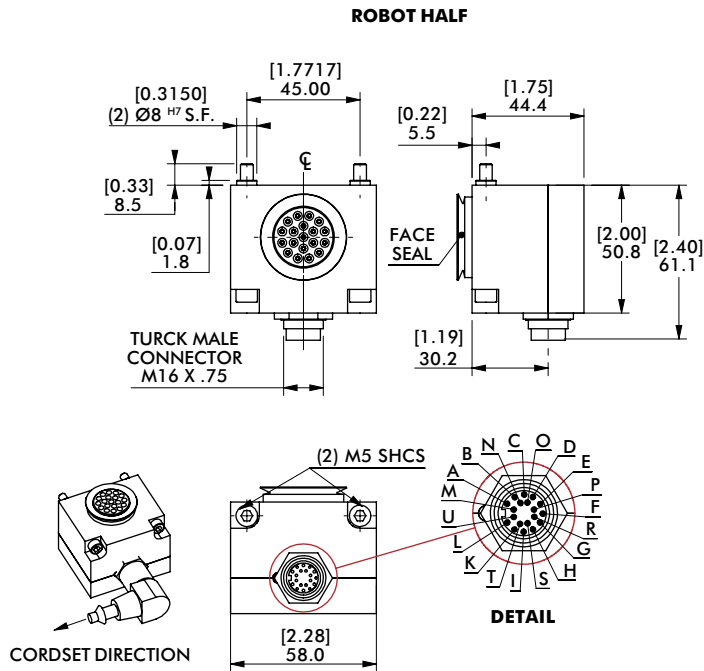
METRIC (MM)
[0] = [±.25]
[0.0] = [±.13]
[0.00] = [±.013]

MODEL NUMBER	"A"	"B"	"C"	"D"	"E"	"F"	WEIGHT
RTP-800	[6.69] 170.0	[6.2992] 160.0	[2.56] 64.94	[1.10] 27.94	[0.22] 5.5	[0.39] 10.0	[4.00 lb] 1.8 kg
RTP-1200	[7.01] 178	[6.6142] 168.0	[2.71] 68.75	[1.25] 31.75	[0.13] 3.25	[0.30] 7.5	[2.90 lb] 1.32 kg

RQC/RTP SERIES

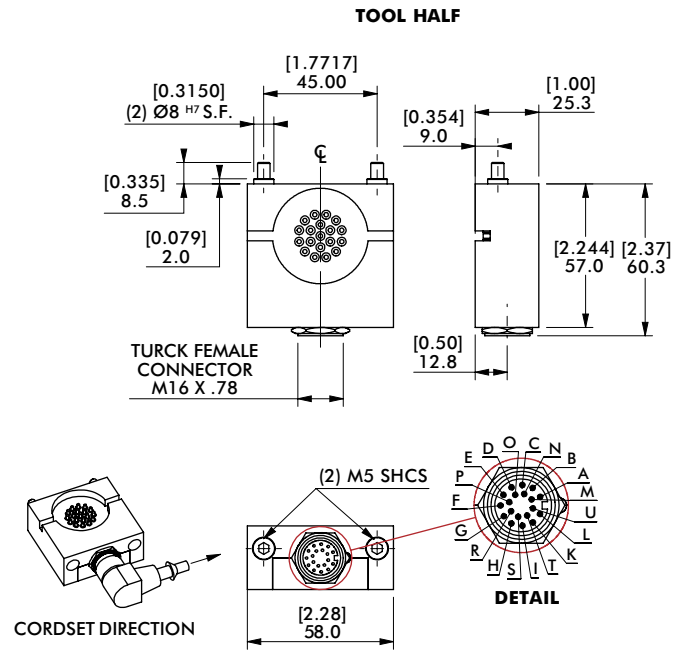
Automatic Tool Changers | Technical Specifications | Dimensions

19 Pin Module 3 Amp - 48 VDC



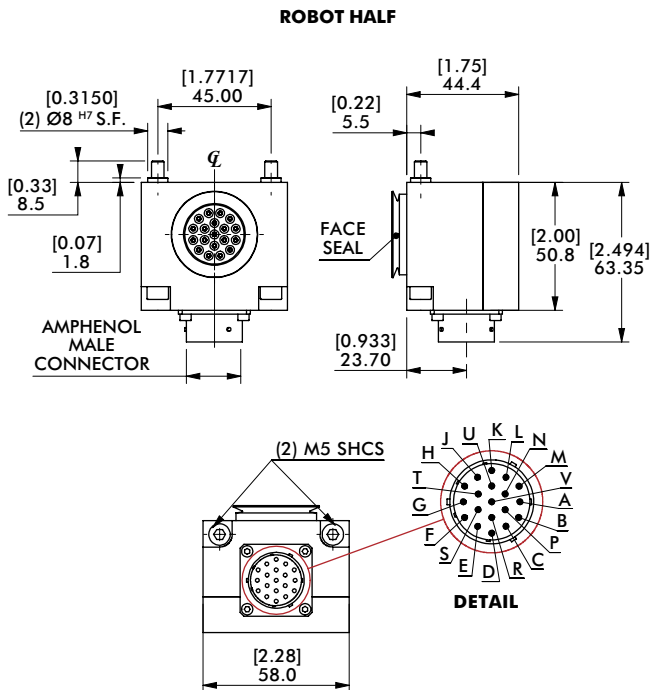
MODULE REPLACEMENT **ROBOT SIDE**
E19 **KE19-RQC**

Module kits above include:
90° Plug Support (without cable),
indexing sleeves and hardware.



MODULE REPLACEMENT **TOOL SIDE**
E19 **KE19-RTP**

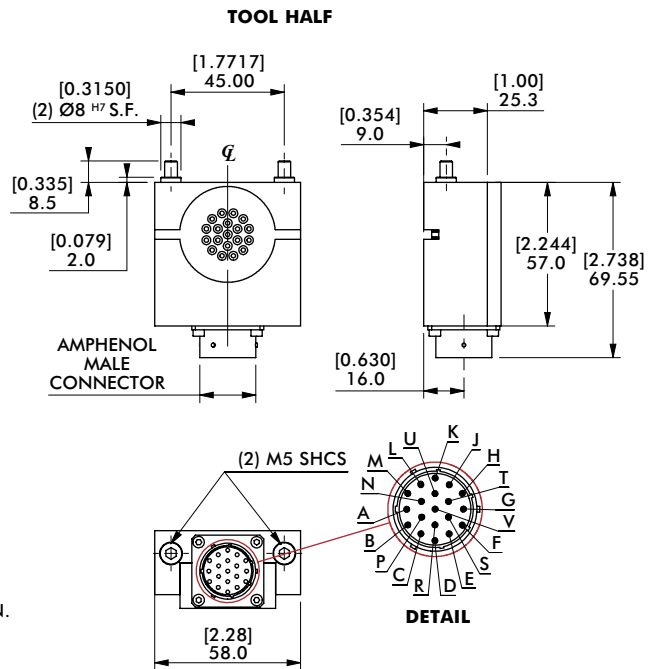
19 Pin Module 5 Amp - 120 VDC



MODULE REPLACEMENT **ROBOT SIDE**
G19 **KG19-RQC**

Module kits above include:
90° Plug support (without cable),
indexing sleeves and hardware.

USER
90°
PLUG
NOT
SHOWN.

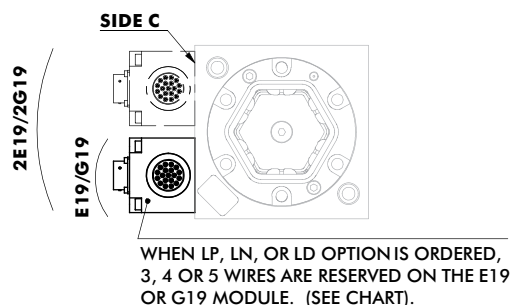


MODULE REPLACEMENT **TOOL SIDE**
G19 **KG19-RTP**

RQC/RTP SERIES

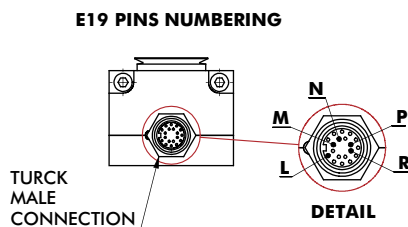
Automatic Tool Changers | Technical Specifications | Dimensions

Modules Connecting with Latch/Unlatch Sensors

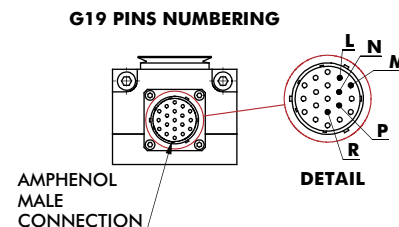


Reserved Pin Numbers on E19/G19		
Sensor/Switch	RQC 400	RQC 800 & 1200
LP or LN (Inductive)	R: + 10 - 30 VDC	R: + 10 - 30 VDC
	L: Common	L: Common
	M: Lock	M: Lock
	N: Unlock	N: Unlock
LD (Dry Contact)	R: + 10 - 30 VDC	R: + 10 - 30 VDC
	L: Common	L: Common
	M: Lock	M: Lock
	N: Unlock	N: Unlock

Pin Numbering

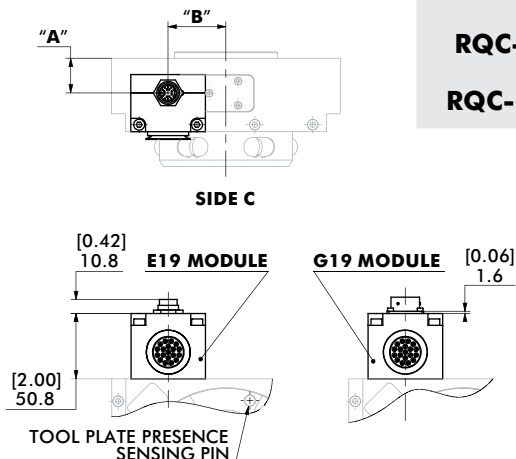


Wire Color on CABL-029 Cordset	
Contact	Wire Color
R	Red
L	Brown
M	Orange
N	Grey/Brown
P	White



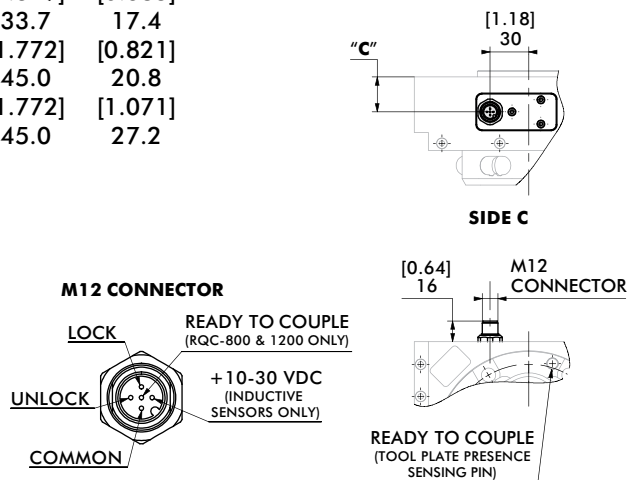
Lock/Unlock Tool Plate Presence Sensing Options (with inductive Sensors and Dry Contact Switches)

SENSING ACCESSORIES LP, LN, OR LD USING 19 PINS MODULES E19 OR G19 (REQUIRES 3, 4, OR 5 OF THE 19 PINS) (AS SHOWN ABOVE)



MODEL	"A"	"B"	"C"
RQC-400	[0.811] 20.6	[1.329] 33.7	[0.685] 17.4
RQC-800	[0.811] 20.6	[1.772] 45.0	[0.821] 20.8
RQC-1200	[1.061] 26.9	[1.772] 45.0	[1.071] 27.2

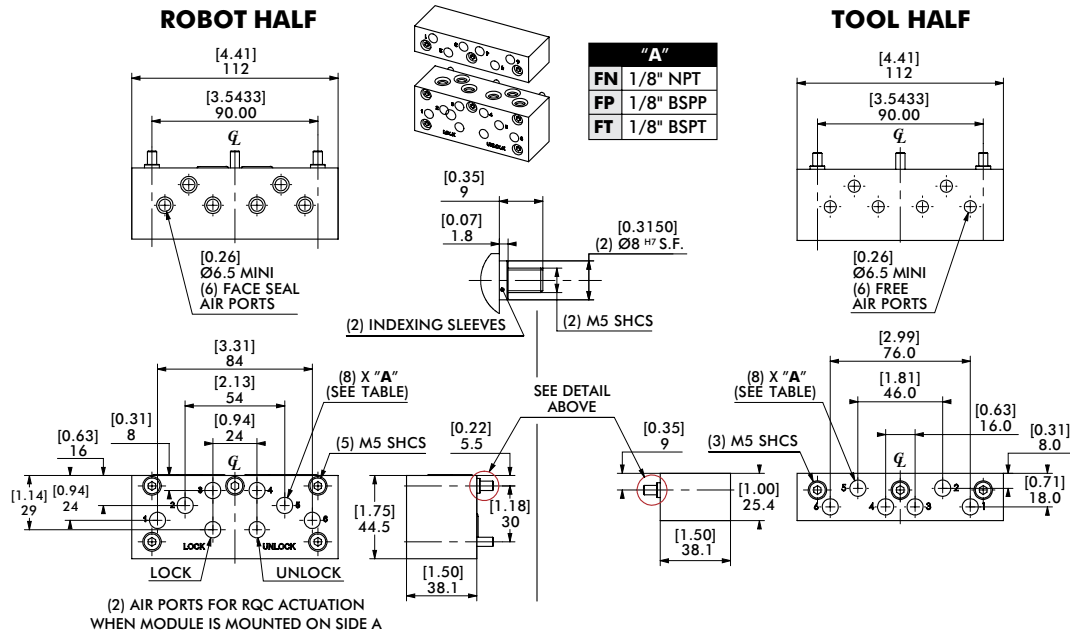
SENSING ACCESSORIES CP, CN, OR CD BY M12 CONNECTOR (3, 4, OR 5 PINS) (SEE BELOW)



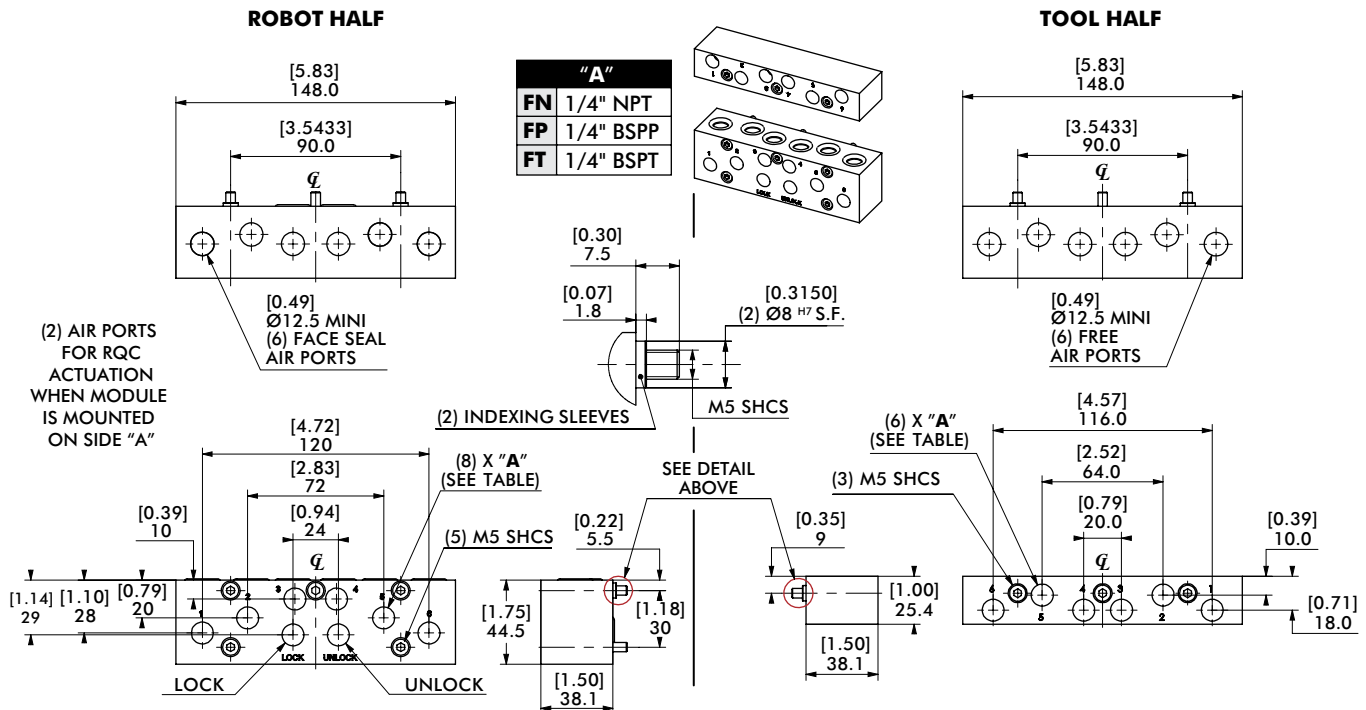
RQC/RTP SERIES

Automatic Tool Changers | Technical Specifications | Dimensions

6 x 1/8" Air Ports Module | Face Seal (for RQC/RTP-200 & RQC/RTP-400)



6 x 1/4" Air Ports Module | Face Seal (for RQC/RTP-800 & RQC/RTP-1200)

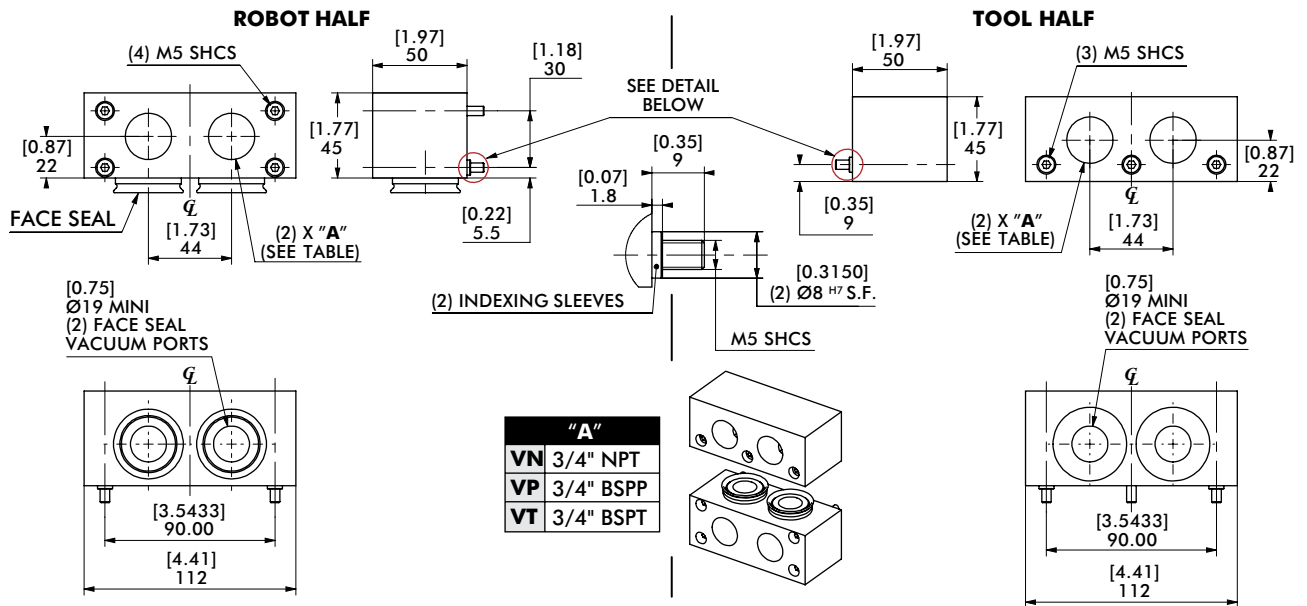


MODULE REPLACEMENT	FOR RQC-200/400	FOR RQC 800/1200
FN	KFN-RQC200	KFN-RQC800
FP	KFP-RQC200	KFP-RQC800
FT	KFT-RQC200	KFT-RQC800

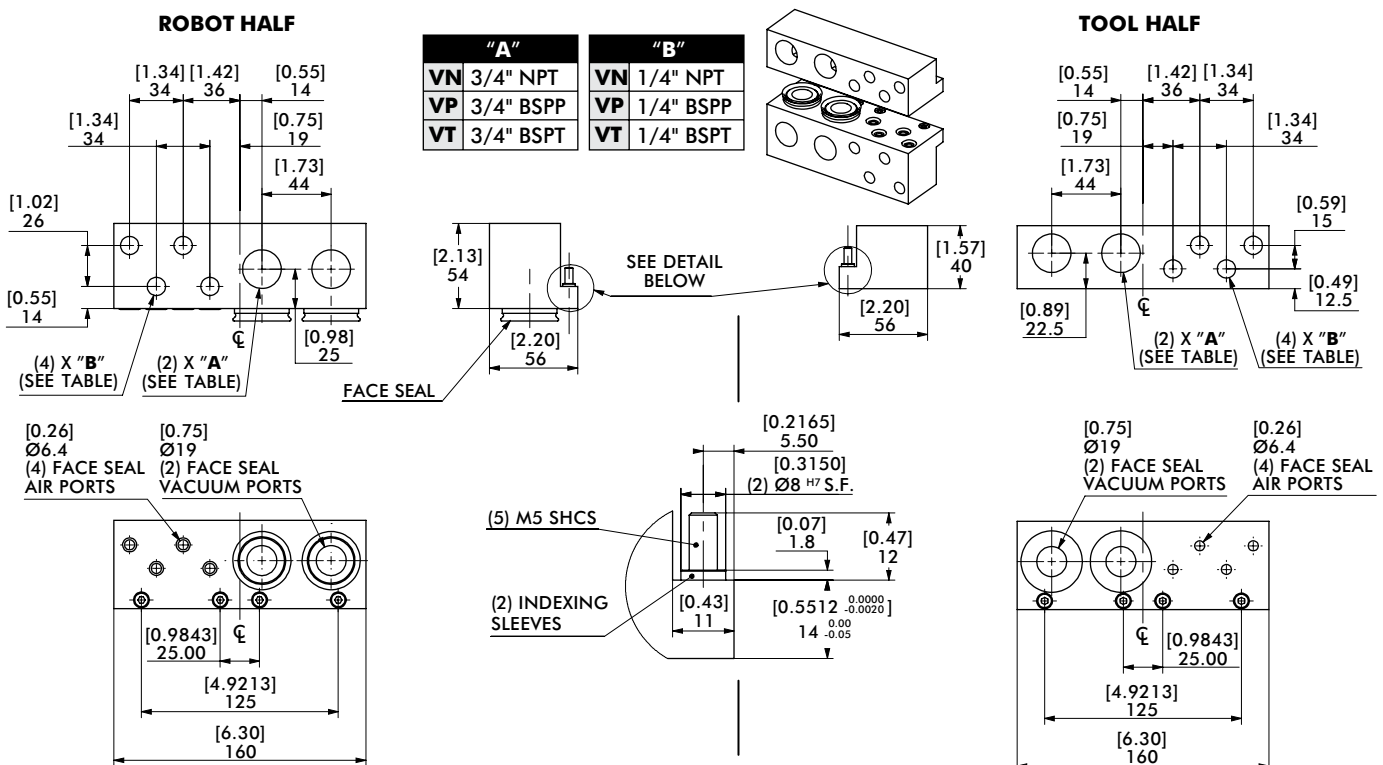
MODULE REPLACEMENT	FOR RTP-200/400	FOR RTP 800/1200
FN	KFN-RTP200	KFN-RTP800
FP	KFP-RTP200	KFP-RTP800
FT	KFT-RTP200	KFT-RTP800

Module kits above include: Couplings, indexing sleeves and hardware.

2 x 3/4" Vacuum Ports Module | Face Seal (for RQC/RTP-200 & RQC/RTP-400)



2 x 3/4" Vacuum Ports Module | Face Seal (for RQC/RTP-800 & RQC/RTP-1200)



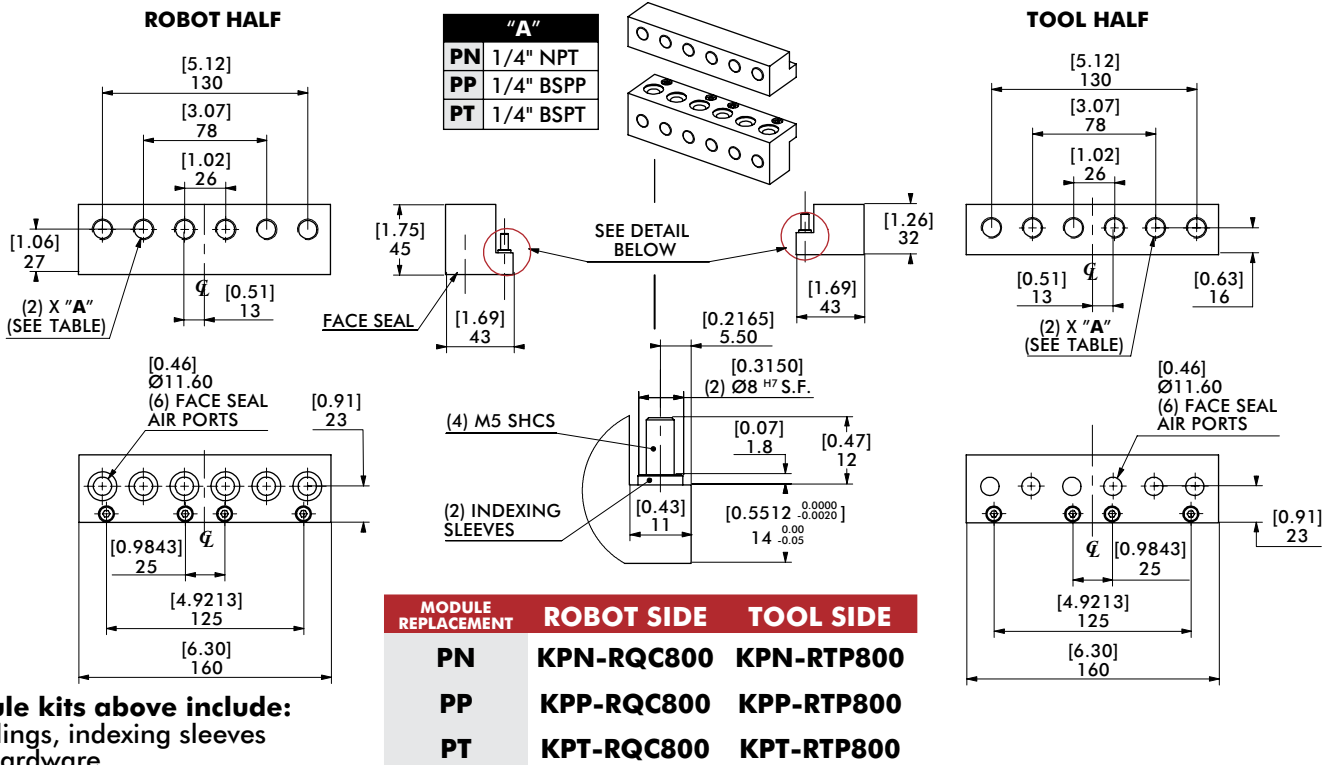
MODULE REPLACEMENT	FOR RQC-200/400	FOR RQC 800/1200	MODULE REPLACEMENT	FOR RTP-200/400	FOR RTP 800/1200
VN	KVN-RQC200	KVN-RQC800	VN	KVN-RTP200	KVN-RTP800
VP	KVP-RQC200	KVP-RQC800	VP	KVP-RTP200	KVP-RTP800
VT	KVT-RQC200	KVT-RQC800	VT	KVT-RTP200	KVT-RTP800

Module kits above include: Couplings, indexing sleeves and hardware.

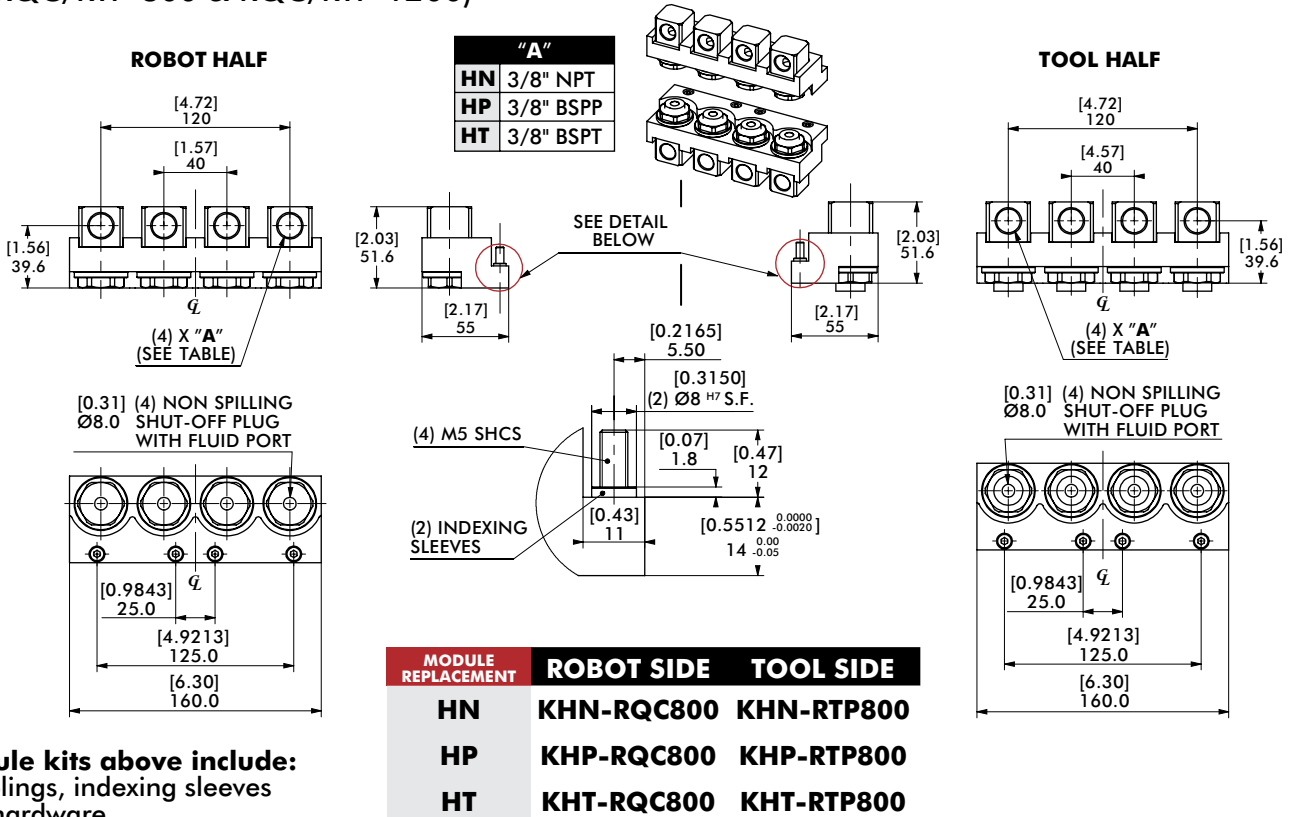
RQC/RTP SERIES

Automatic Tool Changers | Technical Specifications | Dimensions

6 x 1/4" Air Ports Module | Face Seal (for RQC/RTP-800 & RQC/RTP-1200)



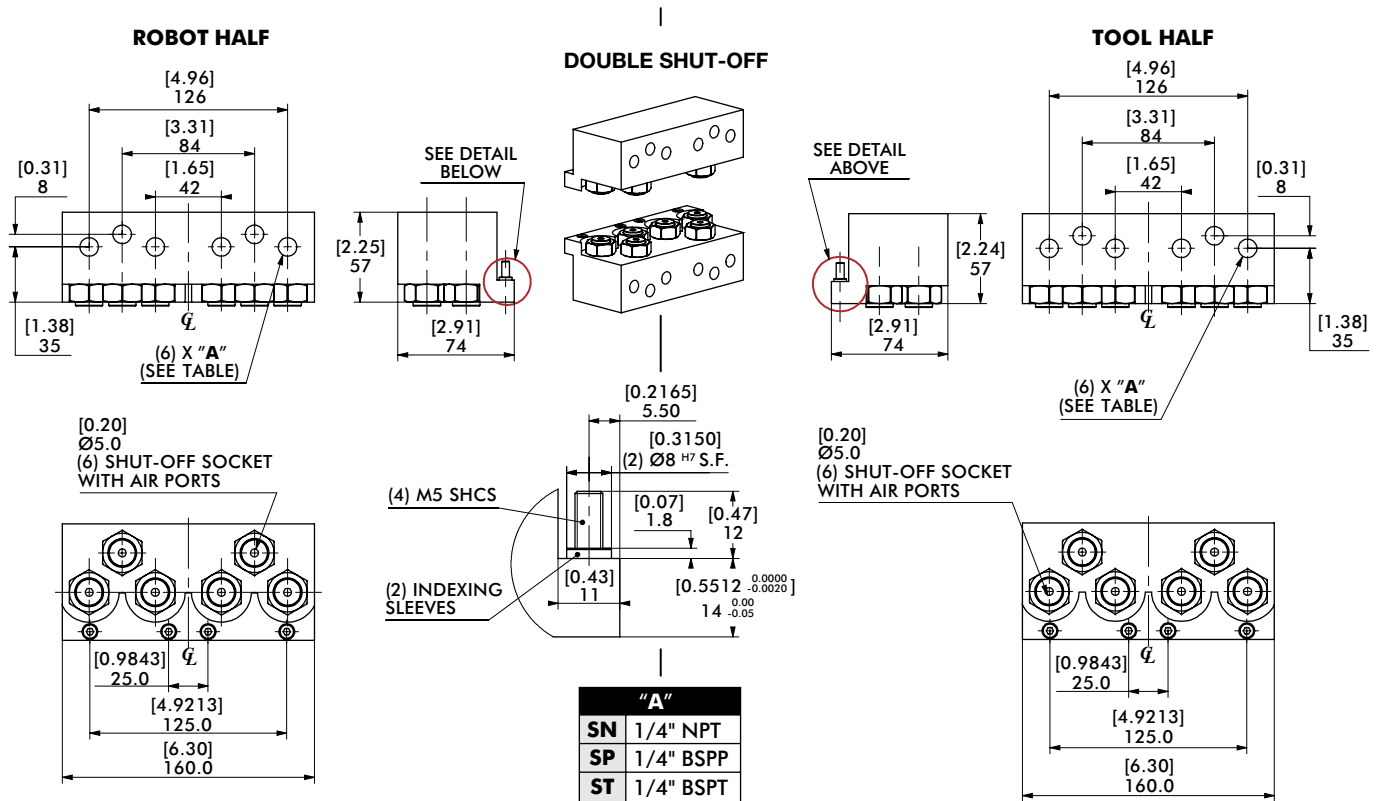
4 x 3/8" Fluid Ports Module | Non Spilling | Double Shut-Off (for RQC/RTP-800 & RQC/RTP-1200)



RQC/RTP SERIES

Automatic Tool Changers | Technical Specifications | Dimensions

6 x 1/4" Air Ports Module | Double Shut-Off Flat Face (SN/SP/ST) (for RQC/RTP-800 & RQC/RTP-1200)



DOUBLE SHUT-OFF		
MODULE REPLACEMENT	ROBOT SIDE	TOOL SIDE
SN	KSN-RQC800	KSN-RTP800
SP	KSP-RQC800	KSP-RTP800
ST	KST-RQC800	KST-RTP800

Module kits above include: Couplings, indexing sleeves and hardware.